

Mr. Balazs---CHAPTER 9-

For Perfect Competition---ONLY

Demand Curve is a horizontal straight line > Demand Curve = Price = Marginal Revenue = Average Revenue

All Markets- PERFECT COMPETITION, MONOPOLISTIC, OLOGOPOLISTIC AND MONOPOLY

Marginal Cost- Declines and then after DMR sets in increases

Variable Costs- are the sum of the Marginal Costs (NEW COSTS THAT RISE WITH A RISE IN OUTPUT)

Eg- Restaurant Wait staff, food other items that can be increased or decreased depending on the output you want on that day.

Average Variable Costs- Variable Costs/#Units Produced at that point

Average Variable Cost follows Marginal Cost, if Marginal Cost declines, the average will decline, if Marginal Cost increases AVC will increase, since Marginal Cost decreases and then once it increases continues to increase, where Marginal Cost intersects AVC, AVC is at its lowest point.

Eg. Restaurant--- not including the fixed costs (ie rent, ovens etc...) the average cost of preparing meal--- ie. It cost me \$20 more dollars to make, serve, continuing opportunity cost and clean up the meal for a customer

Fixed Costs- Sunk/invested monies

EG- Restaurant, rent/ovens, monies you already spend. ie. It cost me \$50,000 to rent the restaurant and buy all the ovens, mixers etc...

Total Fixed Costs- Do not change regardless of the amount of production. Investors want a return on their fixed costs BUT if they don't get their return there's nothing much they can do, since the investment is already paid in.

Average Fixed Costs (AFC)- Since the costs are sunk in, the numerator (TFC) stays the same, while as output (meals) increase, (denominator) so AFC continues to decline

EG Restaurant, if I only make one meal, the \$50,000 fixed cost->AFC of 50,000, if I make two meals, AFC=25,000, if I make 50,000 meals, AFC = 50,000/50,000--1

Total Costs is the sum of Variable Costs plus Fixed Costs- therefore as output increases more and more of the Total Costs is based on the Total Variable Costs

EG Restaurant- Fixed costs 50,000, variable costs for 5000 meals is \$20,000. My total Cost are 70,000

Average Total Costs- TC/Q,

Like AVC, ATC is driven by the AVC (since Fixed Cost don't change, they simply become a smaller and smaller portion of ATC as production increases)

EG Restaurant $50,000 + 20,000/5000$ - average total cost- $70,000/5000$ ---\$14.00 per meal

Profit= Total Revenue (amount of money I receive())– Total Costs (amount it costs me to produce)

EG if I sell 5,000 meals @\$15.00 each---TR=\$75,000, TC=70,000---ECON Prof.--\$5,000

Total Revenue= sum of the Marginal Revenues

IN PERFECT COMPETITION- MARG REV DOESN'T CHANGE---SO THE DEMAND CURVE I FACE IS \$15.00 PER MEAL---WHETHER I SELL 1, 5, 100 OR 5000 MEALS, MY PRICE IS \$15.00, MY MR IS \$15.00 AND MY AVERAGE REVENUE PER MEAL IS \$15.00

If Marginal Revenue increases at a steady pace than so does Total Revenue

Zero profit- a return on your fixed investment, opportunity costs, and repayment of all variable costs

EG. Total Costs (rent, ovens, food, wait staff, what I would've made if I managed a restaurant for someone else, etc...)= \$70,000, Total Revenue=\$14.00 per meal, 5, 000 served=\$70,000->70,000-70,000=0

Economic profit is more than zero profit.

EG see example, \$70,000 cost-> \$75,000 revenue

KEY IDEA

So long as the last good you make costs less or the same as the amount of money you make from selling that unit, it is in your economic interests to produce/sell it. Therefore you produce until $MC=MR$.

If the last meal I served cost me \$13.50 more to make, and I sell it for \$14.00—I make 50 cents on the transaction.--> throw the 50 cents in the profit jar!

If the next meal I serve cost me \$14.00 more to make, and I sell it for \$14.00, I covered all my new expenses->no money to throw in the profit jar, but I did cover my expenses! Plus my opportunity

COSTS

I decided not to make the next meal since it would cost me \$14.01 more to make and I can only sell it for \$14.00. If I made it, I'd have to take a penny out of the profit jar!

If $MC > MR$ then you are losing money on that last good===DON'T MAKE IT DON'T SELL IT

Since MC is rising and MR in perfect competition is flat (in our example \$14.00), we continue to produce/Sell until MC reaches MR.

If where $MC = MR$, MR which is also the price of the good, is more than Average total costs (ATC)-than you are making an economic profit

EG, if when my MC is \$14.00 and the Price of the meal is \$14.00 (in perfect competition all meals would sell for the same price---if I raised the price no meals would be served and if I lowered the price to \$13.90, I wouldn't gain anything but would lose 10 cents on each meal served), the Average total Cost is 13.50---I served 5,000 meals at \$13.50---\$67,500 TC, my revenue was $5,000 \times \$14.00 = \$70,000$ my econ, profit is \$5,000

If $MC = MR$ and ATC is equal to MR/P then you are at zero profit

EG $MC = 14$, $MR = 14$, Average Total Cost of each meal, is $\$70,000 / 5000 = 14.00$

If $MC = MR$ and ATC is above but AVC is below MR/P then you are covering your ongoing costs but not completely getting a return on your fixed investment.

EG $MC = 14$, $MR = 14$, Average Total Cost is \$15.00 per meal—($\$75,000 / 5000$), Total Revenue is -5,000, I am showing a loss—do I stay in business?-> IT DEPENDS---IF I'M COVERING MY NEW COSTS- YES, IE. MY VARIABLE COSTS TOTALED \$60,000 when 5000 meals were served--\$12.00 (AVC) a meal, Total Revenue is $14 \times 5000 = \$70,000$, by staying in business- I can apply \$10,000 towards my original investment (fixed costs)

If $MC = MR$ and also equals AVC you are just paying off your ongoing costs

If $MC = MR$ and is less than AVC you HAVE to put in more money to stay in business and you should shut down!

EG $MC = 14$, $MR = 14$, Average Total Cost is \$15.00 per meal—($\$75,000 / 5000$), Total Revenue is -5,000, I am showing a loss—do I stay in business?-> IT DEPENDS---IF I'M COVERING MY NEW COSTS- NO!!!!!!!!!!
IE. MY VARIABLE COSTS TOTALED \$71,000,000 when 5000 meals were served--\$14.20 a meal, Total Revenue is $14 \times 5000 = \$70,000$, by staying in business- I not only don't cover any of my FIXED COSTS--- BUT, BUT, BUT---NOW I HAVE TO USE MY ATM CARD AND TAKE OUT A \$1000.00 TO PAY THE SALARIES OF MY STAFF!!!====CLLLLLLLLLLLLLLLLLLOOOOOOOOOOOSSSSSSSSEEE DOWN!

Some equivalencies that are important

$$TR = P \times Q$$

$$TC = ATC \times Q$$

When $TR = TC$, breakeven, no economic profit—all firms in perfect competition will move to the point where $TR = TC$

In perfect competition- $P = D = MR = AR$ (Average Revenue per unit)

So since $TR = P \times Q$, TR also $= MR \times Q$

In all markets we always produce until $MC = MR$ (after law of dim. Marg. Returns sets in), if we produced more goods than $MC > MR$ and we'd lose money.

So since we produce until $MC = MR$ then at the break even point $TR = MC \times Q$

NEW AND IMPROVED---SEE BELOW CORRECTED FROM THE ORIGINAL VERSION

In perfect competition all firms will eventually get to the point where $TR = TC$, since $TC = ATC \times Q$ and Q is the same in both above equations, when one is at the breakeven point (no economic profit), $ATC = P$, --PRODUCTIVE EFFICIENCY!--

PRICE = ATC --Your able to buy it at the lowest point of the ATC curve meaning that the firm is producing at its least costly method! AND in the Wonderful World of Perfect Competition---(heavenly music playing) NO WASTE!!

$$P = D = MR = MC = ATC$$

Marginal Revenue is equal to the Marginal Benefit one gets by getting one more good

Your willingness to pay a certain amount for a good theoretically is a measurement of how you value it. In economics the price you are paying is equal to the Marginal Benefit you receive from the good

THEREFORE---MARGINAL BENEFIT = PRICE

IN PERFECT COMPETITION- PRICE = MARGINAL REVENUE

Firms ALWAYS produce until $MR = MC$, so in this case---since $P = MR = MC$ → PRICE EQUAL MARGINAL COST.

In PERFECT (PURE) COMPETITION, THE PURCHASE GETS THE LAST PRODUCT SOLD FOR PRECISELY HOW MUCH IT TOOK TO MAKE IT!!!

Marginal Cost = Marginal Cost

***Marginal Benefit=Marginal Benefit at equilibrium---ALLOCATIVE EFFICIENCY- NO WASTE- THE
ADDITIONAL VALUE THAT THE NEXT GOOD BRINGS IN IS EQUAL TO THE COST OF PRODUCING IT***